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RESEARCH ARTICLE

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Notulae to the Italian flora of algae, bryophytes, fungi and lichens: 13

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Abstract

In this contribution, new data concerning bryophytes, fungi and lichens of the Italian flora are presented. It includes new records and confirmations for the bryophyte genera *Bryum*, *Cryphaea*, *Didymodon*, and *Grimmia*; the fungal genera *Bryostigma*, *Cercidospora*, *Conocybe*, *Cortinarius*, *Endococcus*, *Inocybe*, *Psathyrella*, and *Sphaerellothecium*; the lichen genera *Agonimia*, *Anisomeridium*, *Bilimbia*, *Diplotomma*, *Gyalecta*, *Huneckia*, *Lecidella*, *Lempholemma*, *Myriolecis*, *Nephroma*, *Pannaria*, *Pycnothelia*, *Pyrrhospora*, *Rinodina*, *Stereocaulon*, *Thalloidima*, *Trapelia*, *Usnea*, *Variospora*, and *Verrucaria*.

Keywords

Ascomycota, Basidiomycota, Bryidae

How to contribute

The text of the records should be submitted electronically to: Cecilia Totti (c.totti@univpm.it) for algae, Marta Puglisi (mpuglisi@unict.it) for bryophytes, Alfredo Vizzini (alfredo.vizzini@unito.it) for fungi, Sonia Ravera (sonia.ravera@unipa.it) for lichens. Each text should be within 1,000 characters (spaces included).

Floristic records

BRYOPHYTES

Bryum violaceum Crundw. & Nyholm (Bryaceae)

+ **TAA**: North of Torbole (Trento), near S. Luigi (UTM WGS84: 32T 646149.5083779) in an arable field, 72 m, 8 January 2022, *F. Prosser* (ROV No. BR05987). – Species new for the flora of Trentino-Alto Adige.

According to Aleffi et al. (2020), the only report for Italy of *B. violaceum* is for Vietri sul Mare in Campania (Preston and Blockeel 2006). It is a temperate species, quite common in various European countries (Hodgetts and Lockhart 2020) and probably under-recorded in Italy. It can be distinguished from other species of rhizoid tuber-bearing species of *Bryum* by the combination of rhizoids with a purple violet colour and abundant small spherical, red to purple-red or orange rhizoidal tubers.

F. Prosser

***Cryphaea heteromalla* (Hedw.) D.Mohr (Cryphaeaceae)**

+ **TAA**: On the shore of Lake Idro in Porto Camarella (UTM WGS84: 32T 619235.5073347), 369 m, 7 October 2021, on a branch of *Salix alba* L., *F. Prosser* (ROV BR05670). – Species confirmed for the flora of Trentino-Alto Adige.

Cryphaea heteromalla is not common in northern Italy, where it was mostly reported before 1968 (Aleffi et al. 2020); in particular, in Trentino-Alto Adige, it was previously known for Merano, Bolzano, and Riva del Garda (Dalla Torre and Sarnthein 1904). In the new site, *C. heteromalla* was fertile and accompanied by *Amblystegium serpens* (Hedw.) Schimp., *Hypnum cupressiforme* Hedw., *Orthotrichum affine* Schrad. ex Brid., and *Radula complanata* (L.) Dumort.

F. Prosser

***Didymodon umbrosus* (Müll.Hal.) R.H.Zander (Pottiaceae)**

+ **TAA**: North of Torbole (Trento), near S. Luigi (UTM WGS84: 32T 646163.5083992) in an apple orchard, 73 m, 8 January 2022, *F. Prosser* (ROV No. BR05986). – Species new for the flora of Trentino-Alto Adige.

Didymodon umbrosus is an European–Southwest Asian species, reported in Italy only for Lazio, Marche, and Sicilia (Aleffi et al. 2020), so this new record is the first for northern Italy. So far, it is not reported for Austria (Köckinger et al. 2022) and Switzerland (Swissbryophytes 2022), and the only data for the Alps are probably from the surroundings of Nice and Monaco (INPN 2022). It is probably a spreading neophyte of American origin, first found in Europe in Great Britain in 1958 (Blockeel et al. 2014). In this new site, this species was found on clayey-sandy soil and at the base of the apple trees up to the graft level.

F. Prosser

***Didymodon sinuosus* (Mitt.) Delogne (Pottiaceae)**

+ **VEN**: Along Adige River near Begosso (Verona) (UTM WGS84: 32T 688223.5001986), 11 m, 22 October 2021, *F. Prosser* (ROV BR05671). – Species new for the flora of Veneto.

Didymodon sinuosus was previously reported by Aleffi et al. (2020) in northern Italy for Piemonte, Emilia-Romagna, and Friuli-Venezia Giulia. This specimen was collected at the foot of a large poplar together with *Leskea polycarpa* Hedw. The presence of silt in the sample indicates submersion during exceptional floods.

F. Prosser

***Grimmia unicolor* Hook. (Grimmiaceae)**

+ **TAA**: Lagorai chain, below Cima Valcigolera (Trento) (UTM WGS84: 32T 711223.5126118), 2205 m, 1 September 2021, south-facing quartz phyllite cliff, *F. Prosser* (ROV No. BR05669). Lagorai chain Monte Ziolera (Trento), cliff towards

Passo Manghen (UTM WGS84: 32T 689199.5116204), 2248 m, 21 July 2021, porphyry cliff facing south, *F. Prosser* (ROV No. BR05929). – Species confirmed for the flora of Trentino-Alto Adige.

Grimmia unicolor is boreal-montane species rare in Italy, where it is known only from Valle d'Aosta, Piemonte and, with old reports, from Lombardia, Trentino-Alto Adige and Veneto. In Trentino-Alto Adige, it was previously signalled from Val Venezia in Val Pejo, Malga Bedole in Val Genova, Val di Fumo near Merano (Dalla Torre and Sarnthein 1904), and near Innichen/S. Candido before 1920 (FloraFaunaSüdtirol). In the new site of Cima Valcigolera, this species was found together with *Anomobryum concinnatum* (Spruce) Lindb.

F. Prosser

FUNGI

Bryostigma molendoi (Heufl. ex Arnold) S.Y.Kondr. & Hur (Arthoniaceae)

+ **LIG**: via Iulia Augusta, strada per Verzi (Savona) on *Calogaya saxicola* (Hoffm.) Vondrák (UTM WGS84: 32T448864.4893367), 103 m, 11 July 2012, leg. *A. Guttová, L. Paoli*, det. *V. Darmostuk* (SAV sub *Solenopsora candicans* (Dicks.) J. Steiner). – Species new for the flora of Liguria.

Bryostigma molendoi is a common lichenicolous fungus in Italy known from several administrative regions (Nimis 2016). Most previous records of this fungus on *Xanthoria* sp. belong to *Bryostigma parietinarium* (Hafellner & Fleischhacker) S.Y.Kondr. & Hur (Fleischhacker et al. 2016).

V. Darmostuk, A. Guttová, L. Paoli

Cercidospora macrospora (Uloth) Hafellner & Nav.-Ros. (Dothideales, incertae sedis)

+ **PIE**: Valli di Lanzo, along the path "sentiero balcone", Usseglio (Torino) on apothecia of *Protoparmeliopsis muralis* (Schreb.) M.Choisy (UTM WGS84: 32T 3600004.5010842), 1570 m, 22 December 2021, leg. *A. Chiariglione*, det. *D. Isocrono*, conf. *W. v. Brackel* (ORO n. 1302) – Species new for the flora of Piemonte.

Cercidospora macrospora is a lichenicolous fungus, with perithecioid ascomata partially immersed in the host and appearing black under the magnifying lens. The ascomata wall is bluish-greenish, intensively pigmented near the ostiolum. Asci are cylindrical, fissitunicate, with a small apical chamber, and four hyaline 1-septate asco spores measuring 20–25(–30) × 5–7 µm. Similar 4-spored asci also occur in *C. crozalsiana* (H.Olivier) Nav.-Ros., Cl.Roux & Casares and *C. stenotropae* Nav.-Ros. & Hafellner, that can be distinguished by the asci and ascospore size (Navarro-Rosines et al. 1995; Calatayud et al. 2013). *Cercidospora macrospora* is considered a holarctic taxon (Hafellner 1987), and this is the first record for the western sector of the Italian Alps (Brackel 2016).

D. Isocrono, W. v. Brackel

***Conocybe velata* (Velen.) Watling (Bolbitiaceae)**

+ **CAL**: Botanical Garden of the University of Calabria, Rende (Cosenza), on the ground between the edge of a riparian wood, *Populus canescens* (Aiton) Sm. as prevailing species (UTM WGS84: 33S 605842.4357370), 200 m, 19 October 2018, *N.G. Passalacqua, A.B. De Giuseppe, G. Sicoli* (CLU No. F317). – Species new for the flora of Calabria.

A couple of slender, small-sized and mycenoid basidiomata referable to the genus *Conocybe* Fayod (due to the campanulate and ochraceous-yellowish pilei, exannulate stipe, and rust-brown spore print) was detected in the grassy litter at the edge of a poplar stand. This saprotrophic fungus was macroscopically identified as *C. velata* due to white and appendiculate velar rests at the pileus margin, and microscopically on account of the shape of cheilocystidia which appeared not only lageniform, but also cylindrical and sometimes even subcapitate. The spores were brown, smooth, ellipsoid, with a prominent germ pore, and 7–10 × 4–5 µm in size (Watling 1992). *Conocybe velata* seems to occur mainly in the central regions of Italy, where it has been more commonly reported as *C. appendiculata* Watling (Onofri et al. 2013).

G. Sicoli, A.B. De Giuseppe, N.G. Passalacqua

***Cortinarius confirmatus* Rob.Henry (Cortinariaceae)**

+ **LIG**: Trigoso, Sestri Levante (Genova), under *Quercus ilex* L., and *Arbutus unedo* L. (UTM WGS84: 32T 535636.4900878), 152 m, 29 December 2015, *F. Boccardo* (Herb. GDOR 3803). – Species new for the flora of Liguria.

The diffusion of *C. confirmatus* is widely documented in France, based on morphological and genetic evidence, but it is also present in Spain, Italy (Calabria), and Iran, highlighting a Eurasian distribution (Liimatainen et al. 2017; Ravera et al. 2021b). *Cortinarius confirmatus* is a polymorphic species in terms of basidioma colour, spore shape, habitat, and habitus. The typical form is characterized by cespitose habit, brown basidioma without violet tint, universal veil white, negative reaction to Guaiac tincture, raphanoid smell, and ellipsoidal spores (7)7.5–9.5(10) × 4.5–5.5(6) (Bidaud et al. 2015). This record is the first for Liguria.

F. Dovana, F. Boccardo, M. Clericuzio

***Endococcus collematis* Brackel (Dothideomycetes)**

+ **BAS**: Forest near Castelluccio Superiore (Potenza), on *Lathagrium* sp. (UTM WGS84: 33T 583982.4429563), 779 m, 1 February 2015, leg. *A. Guttová, L. Paoli*, det. *V. Darmostuk* (SAV sub *Solenopsora candicans* (Dicks.) J. Steiner). – Species new for the flora of Basilicata.

+ **TOS**: Mt. Civitella, Monte Penna Natural Reserve, Castell'Azzara (Grosseto), on *Lathagrium auriforme* (With.) Otálora, P.M.Jørg. & Wedin (UTM WGS84: 32T 718100.4739032), 1024 m, 10 April 2010 leg. *A. Guttová, L. Paoli*, det. *V. Darmostuk* (SAV sub *Solenopsora candicans* (Dicks.) J. Steiner). – Species new for the flora of Toscana.

Our specimen from Toscana is characterized by globose shiny black perithecioid ascomata, up to 150 µm diameter, 8-spored asci and pale brown narrowly ellipsoid ascospores with rounded ends, (8.4–)10.2–13.8(–16.0) × (3.2–)3.4–4.4(–4.8) µm, l/b = (2.1–)2.4–3.4(–4.8) (n = 35). This recently described fungus was reported on the thallus of several *Collema* and known from Germany, Italy (Abruzzo, Calabria, and Campania), and Switzerland (Brackel 2021). Probably, some specimens of *E. collematis* are included in the broad concept of *Endococcus pseudocarpus* Nyl. Therefore, *E. collematis* is likely to be more widely distributed in Europe.

V. Darmostuk, A. Guttová, L. Paoli

***Inocybe acuta* Boud. (Inocybaceae)**

+ **CAL**: Botanical Garden of the University of Calabria, Rende (Cosenza), on the ground at the margin of an artificial carr, where *Populus*, *Salix*, *Typha*, and *Cladium* are the prevailing growing plant genera (UTM WGS84: 33S 605982.4357356), 200 m, 17 September 2021, *A.B. De Giuseppe, N.G. Passalacqua, G. Sicoli* (CLU No. F319). – Species new for the flora of Calabria.

A group of solitary, but gregarious, basidiomata belonging to *I. acuta* were observed on the ground close to culms of *Typha angustifolia* L. and in the vicinity of willow plants at the edge of an artificial pond. The pilei were conical and initially acutely umbonate, then almost applanate, dark umber, fibrillose, and 2–3 cm wide. The stipe was rather short, brownish and with a small, paler bulb at the base. The gills were brown and the spores strongly nodulose, 9–11 × 6–7 µm in size. Hymenial cystidia were ventricose-lageniform and mostly crested (Printz 1992; Courtecuisse and Duhem 1995; Kokkonen and Vauras 2012). In Italy *I. acuta* seems so far to have been reported only in Toscana and Veneto (Onofri et al. 2013).

G. Sicoli, A.B. De Giuseppe, N.G. Passalacqua

***Psathyrella badiophylla* (Romagn.) Bon (Psathyrellaceae)**

+ **CAL**: Botanical Garden of the University of Calabria, Rende (Cosenza), on the ground at the edge of a riparian wood, *Populus canescens* (Aiton) Sm. as prevailing species (UTM WGS84: 33S 606002.4357361), 200 m, 13 October 2021, *G. Sicoli, A.B. De Giuseppe, N.G. Passalacqua* (CLU No. F318). – Species new for the flora of Calabria.

Solitary psathyrelloid small basidiomes were observed on the ground along a sandy track at the edge of a poplar stand flanking a carr. Pilei were campanulate, striate and 2 cm in diameter. They were also clearly hygrophanous since initially brownish tending to become ochraceous while drying. A slender, pale and exannulate stipe was sustaining brown straight to slightly ventricose gills. No pleurocystidia but utriform cheilocystidia were observed. The spores were dark brown, smooth, ellipsoid, with a distinct germ pore, and 11–15 × 6.5–7 µm in size. The above morphological characteristics led us to identify the fungus as *P. badiophylla* (Kits van Waveren 1985; Vesterholt and Knudsen 1992).

G. Sicoli, A.B. De Giuseppe, N.G. Passalacqua

***Sphaerellothecium parietinarium* (Linds.) Hafellner & V. John (Mycosphaerellaceae)**

+ **SAR**: Dune di Piscinas, Arbus (Sud Sardegna), on apothecia of *Xanthoria parietina* (L.) Th.Fr. (UTM WGS84: 32S 453194.4376787) 14 m, 18 June 2021, *D. Isocrono*, conf. *W. v. Brackel* (ORO n. 1301). – Species new for the flora of Sardegna.

Sphaerellothecium parietinarium is a lichenicolous fungus with crowded black perithecia partially immersed (up to 2/3) in the host tissue (apothecia and occasionally thalli of *Xanthoria* species). It bears saccate asci with two-celled and smooth-walled ascospores, irregularly arranged in the asci. This species is not reported for Sardegna (Brackel and Berger 2019), and this is the third record for Italy where it is known from Campania (Puntillo and Brackel 2017) and Calabria (Brackel and Puntillo 2016). The specimen from Sardegna was found on *Xanthoria parietina* apothecial discs growing on twigs of *Juniperus macrocarpa* Sm. in sand dunes.

D. Isocrono, W. v. Brackel

LICHENS

***Agonimia opuntiella* (Buschardt & Poelt) Vězda (Verrucariaceae)**

+ **SAR**: near the road 2 km SW of San Pantaleo, Arzachena (Sassari), on bark of *Quercus coccifera* L. (UTM WS84: 32T 537499.4542800) 40 m, 30 April 2012, *J. Malíček* (PRA). – Species new for the flora of Sardegna.

Agonimia opuntiella is a usually sterile microlichen with squamulose thallus with more or less developed hyaline hairs. It grows on various substrates, such as bryophytes, plant debris, calcareous soil, rarely also on rocks and tree bark. This species, recently collected for the first time in other central-southern Italian administrative regions (Ravera et al. 2017; Caporale and Ravera 2020), seems to be rare but likely underestimated in Italy (Nimis 2016).

J. Malíček, S. Ravera

***Anisomeridium biforme* (Schaer.) R.C.Harris (Monoblastiaceae)**

+ **TOS**: Piteglio (Pistoia), on *Castanea sativa* Mill. (UTM WGS84: 32T 641833.4875706), 750 m, 28 January 2022, leg. *R. Benesperi, E. Bianchi, L. Di Nuzzo, L. Paoli, S. Ravera*, det. *S. Ravera* (PAL). – Species new for the flora of Toscana.

Anisomeridium biforme is a nearly cosmopolitan pyrenocarpous lichen, common on deciduous trees in open woodlands or sheltered open situations mostly in areas with a humid-warm climate (Nimis 2016). This specimen was collected on an old chestnut tree.

E. Bianchi, L. Di Nuzzo, S. Ravera

***Bilimbia accedens* Arnold (Ramalinaceae)**

+ **LOM**: Valle del Venerocolino, Schilpario (Bergamo), on moss above base-rich siliceous rock in a moist coniferous forest (UTM WGS84: 32T 589454.5097752),

1250 m, 30 August 2021, leg. *G. Gheza*, det. *G. Gheza, F. Bottegoni* (BOLO). – Species confirmed for the flora of Lombardia.

Bilimbia accendens is a muscicolous species with optimum in upland areas (Nimis 2016). Nimis (2016) quoted for Lombardia only an old record by Jatta (1909–1911).

G. Gheza, F. Bottegoni

***Diplotomma glaucoatrum* (Nyl.) Cl.Roux (Caliciaceae)**

+ **TOS**: Arcipelago Toscano National Park, Elba island, Sorgente shore (Livorno), on granite (UTM WGS84: 32T 604849.4741994), 3 m, 14 July 2021, *J. Nascimbene* (BOLO). – Species new for the flora of Toscana.

This species, belonging to the *Diplotomma alboatrum*-complex, is restricted to coastal-maritime environments and, in Italy, it was previously reported only from Sardegna (Nimis 2016). The record reported here refers to a site with ecological conditions similar to those of the Sardinian locality, i.e., siliceous boulders on steep slopes with garrigue at seashore, just above high-water level.

J. Nascimbene

***Gyalecta arbuti* (Bagl.) Baloch & Lücking (Gyalectaceae)**

+ **EMR**: Granaglione (Alto Reno Terme), on a chestnut trunk (UTM WGS84: 32T 656948.4886382), 740 m, 26 January 2022, leg. *R. Benesperi, E. Bianchi, L. Di Nuzzo, D. Isocrono, L. Paoli, S. Ravera*, det. *D. Isocrono, S. Ravera* (ORO 1303). – Species new for the flora of Emilia Romagna.

Gyalecta arbuti is a crustose lichen found in humid-warm environments. It is related to *G. carneola* (Ach.) Hellb. with which it is misidentified due to their similar ecology (Nimis 2016). Thallus and apothecia are also similar; smaller ascospores (29–50 × 3–5 µm vs. 53–90 µm) with fewer septa (6–12 vs. 10–18) allow to distinguish it from *G. carneola*. In Italy, this species was known, mainly from old collections, for Liguria and Sardegna (Nimis 1993 and references therein). It was recently discovered in Toscana and Campania (Ravera et al. 2021a) and recollected in Liguria (Giordani and Incerti 2008). The Italian Red List of epiphytic lichens listed *G. arbuti* under the "Data deficient" category (Nascimbene et al. 2013).

R. Benesperi, D. Isocrono, L. Paoli

***Huneckia pollinii* (A. Massal.) S.Y.Kondr., Elix, Kärnefelt, A.Thell, J.Kim, A.S.Kondratiuk & J.-S.Hur (Teloschistaceae)**

+ **LOM**: Pista degli Abeti, Schilpario (Bergamo), on bark of *Fraxinus excelsior* L. at the edge of a moist coniferous forest near a stream (UTM WGS84: 32T 592612.5096572), 1207 m, 5 September 2020, leg. *G. Gheza*, det. *G. Gheza, F. Bottegoni, C. Vallese* (BOLO). – Species confirmed for the flora of Lombardia.

Huneckia pollinii is found mostly on trees with smooth bark along watercourses, as in the case of the record reported here. It was recorded previously in Lombardia by

Anzi (1860) from the surroundings of Como and Val Chiavenna, as abundant on bark of several tree species. It is listed as "Near-threatened" in the Red List of the epiphytic lichens of Italy (Nascimbene et al. 2013).

G. Gheza, C. Vallese, F. Bottegoni

***Lecidella flavosorediata* (Vězda) Hertel & Leuckert (Lecanoraceae)**

+ **CAL**: Sila Piccola, Trepidò, Cotronei (Crotone), on bark of *Pinus nigra* subsp. *laricio* (UTM WGS84: 33S 644624.4340015), 1297 m, 10 August 2021, *D. Puntillo* (CLU No. 17977). – Species new for the flora of Calabria.

Lecidella flavosorediata is characterized by a yellowish sorediate indistinct thallus forming a subleprose crust with farinose soredia, sometime gathered into larger consoredia. Apothecia are rare. This species is widely diffused in the pine forests of the Sila plateau where it colonizes wide portions of bark at the base of *Pinus nigra* J.F.Arnold subsp. *laricio* Palib. ex Maire trunks.

D. Puntillo

***Lempholemma cladodes* (Tuck.) Zahlbr. (Lichinaceae)**

+ **ITA** (**VEN**): Dolomiti Bellunesi National Park, Vette Feltrine, Mt. Pavionet (Belluno), on calciferous rocks, Formazione di Fonzaso (UTM WGS84: 32T 720600.5108735), 2070 m, 9 August 2021, *J. Nascimbene* (BOLO). – Species new for the flora of Italy (Veneto).

This species is widespread in the Northern Hemisphere (Scandinavia, North America) and was rarely collected in the Alps, being only known from Switzerland (Nimis et al. 2018). It has a micro-fruticose thallus forming spreading cushions. The record reported here refers to material collected on Mesozoic calciferous rocks with periodical percolation of water colonized by other cyanolichens such as *Placynthium garovaglii* (A.Massal.) Malme and *P. filiforme* (Garov.) M.Choisy.

J. Nascimbene, P.L. Nimis

***Myriolecis liguriensis* (B.De Lesd.) Cl.Roux (Lecanoraceae)**

+ **TOS**: Arcipelago Toscano National Park, Elba island, Sorgente shore (Livorno), on granite (UTM WGS84: 32T 604849.4741994), 3 m, 14 July 2021, *J. Nascimbene* (BOLO). – Species new for the flora of Toscana.

This is a poorly known taxon related to *M. albescens* (Hoffm.) Śliwa, Zhao Xin & Lumbsch, that was previously reported only from Liguria and Sardegna (Nimis 1993) in Italy. It is related to coastal environments, being confined to the salt-spray belt (Nimis 2016).

J. Nascimbene

***Nephroma tropicum* (Müll.Arg.) Zahlbr. (Nephromataceae)**

+ **ITA** (**VEN**): Val Visdende, Costa d'Antola (Belluno), on spruce (UTM WGS84: 32T 320236.5165788), 1320 m, 7 December 2018, leg. *J. Nascimbene*, det. *E. Timdal*

(BOLO) [GenBank MZ130553 (ITS), MZ133754 (mtSSU)]. – Species new to the flora of Italy (Veneto).

This species belongs to the *Nephroma helveticum* Ach. species complex, a circumpolar, boreal-temperate element occurring in North America, Europe, and Asia (Timdal et al. 2021). In Europe, *N. tropicum* is currently known only from three localities in Norway, Germany, and Italy. The record reported here refers to a cold-humid site in the north-eastern part of the Belluno province, where *N. tropicum* was found together with several species that were also present in the Scandinavian site, such as *Evernia divaricata* (L.) Ach., *Ramalina obtusata* (Arnold) Bitter, and *R. thrausta* (Ach.) Nyl. (Timdal et al. 2021).

J. Nascimbene, P.L. Nimis, E. Timdal

***Pannaria conoplea* (Ach.) Bory (Pannariaceae)**

+ **LOM**: Bagni di Masino, Valmasino (Sondrio), on granite boulders and bark of *Fraxinus excelsior* L. at the edge of a moist coniferous forest (UTM WGS84: 32T 546196.5121355), 1172 m, 24 August 2019, *G. Gheza* (PAV); valley bottom of Val di Mello, Valmasino (Sondrio), on mossy granite boulders in a moist coniferous forest (UTM WGS84: 32T 552371.5123599), 1200 m, 26 August 2019, *G. Gheza* (PAV); western side of the lower Valle del Vò, Schilpario (Bergamo), on a mossy schist rock (UTM WGS84: 32T 588683.5097526), 1140 m, 26 August 2021, *G. Gheza* (PAV). – Species confirmed for the flora of Lombardia.

Pannaria conoplea is a cyanolichen currently declining in northern Italy (Nimis 2016), and reported from Lombardia only by Garovaglio (1838), Anzi (1860) and Giacomini (1937). It is listed as "Near-threatened" in the Red List of the epiphytic lichens of Italy (Nascimbene et al. 2013). The record from Schilpario is the first from the Orobic Alps.

G. Gheza

***Pycnothelia papillaria* Dufour (Cladoniaceae)**

+ **LIG**: Passo della Forcella (Genova), in xeric grassland on schist near the roadside (UTM WGS84: 32T 526710.4923271), 880 m, 20 August 2015, *W. v. Brackel* (GE). – Species confirmed for the flora of Liguria.

Pycnothelia papillaria is an extremely nitrophobic lichen growing on acid soil in heaths and open grassland, strongly declining in most parts of Europe, except for the Alps, due to the general eutrophication of the landscape. According to Nimis and Martellos (2022), it is rare in the Italian Alps and very rare in the higher elevations of the northern Apennines. There are several historical records of this species from Liguria (Nimis 1993 and references therein), the last dating back more than 80 years (Sbarbaro 1941, as *Cladonia papillaria*), from four localities. In the Passo della Forcella, we found it growing on open soil together with *Cladonia foliacea* (Huds.) Willd., *C. furcata* (Huds.) Schrad., *C. pyxidate* agg., *Leptogium lichenoides* agg., *Monerolechia badia* (Fr.) Kalb, *Xanthoparmelia conspersa* (Ach.) Hale, and *X. stenophylla* (Ach.) Ahti & D.Hawksw.

W.v. Brackel, P. Giordani

***Pyrrhospora quernea* (Dicks.) Körb. (Lecanoraceae)**

+ **VEN**: Monte Baldo (Verona) (UTM WGS 84: 32T 642981.5064682), 1855, *A. Massalongo* (Herb. Massalongo MSNVE 25752). – Species historically recorded for the flora of Veneto.

Collected and identified by A. Massalongo, this specimen is stored in a collection preserved at the Natural History Museum (NHM) of Venice. The collection was originally donated by Massalongo to the Società Veneta di Scienze Naturali, and then transferred to the NHM of Venice. *Pyrrhospora quernea* is a mainly Mediterranean-Atlantic, epiphytic species, abundant in humid coastal-Mediterranean sites, much rarer elsewhere. It occurs rarely, and mostly in the sterile state, in the Insubrian District of Lombardia, while it is probably extinct in other portions of northern Italy.

S. Martellos, P.L. Nimis, L. Seggi

***Rinodina albana* (A.Massal.) A.Massal. (Physciaceae)**

+ **LOM**: above Bagni di Masino towards Rifugio Omio, Valmasino (Sondrio), on bark of *Fagus sylvatica* L. in a beech forest (UTM WGS84: 32T 545468.5121688), 1278 m, 24 August 2019, *leg. G. Gheza*, det. *H. Mayrhofer* (PAV). – Species confirmed for the flora of Lombardia.

The epiphytic *Rinodina albana* is reported here from a forest stand attributed to the Natura 2000 Habitat 9110 ("*Luzulo-Fagetum* beech forests"). According to Nimis (1993), previous records from Lombardia come from exsiccata by Garovaglio (Lich. Ital. XXXIX n. 10) and Anzi (Lich. Rar. Langob. n. 304), but the one by Garovaglio is, in fact, *Lecanora polytropa* (Hoffm.) Rabenh. (Tomaselli 1946) and the one by Anzi contains *R. sophodes* (Ach.) A.Massal., *R. oleae* Bagl., and *R. polyspora* Th.Fr. (Magnusson 1947; Ropin and Mayrhofer 1993; Giralt and Mayrhofer 1995). Magnusson (1947) reported it from Valtellina (Lombardia) based on another exsiccatum by Anzi (Lich. Prov. Sondr. n. 133), following Anzi (1860).

G. Gheza, S. Assini, H. Mayrhofer

***Stereocaulon vesuvianum* var. *nodulosum* (Wallr.) I.M.Lamb (Stereocaulaceae)**

+ **ITA** (**LOM**): eastern side of the lower Valle del Vò, Schilpario (Bergamo), on siliceous stones in a scree (UTM WGS84: 32T 588548.5098017), 1190 m, 31 October 2021, leg. *G. Gheza*, det. *G. Gheza, F. Bottegoni, J. Nascimbene* (BOLO). – Variety new for the flora of Italy (Lombardia).

Stereocaulon vesuvianum var. *nodulosum* is a fruticose lichen dwelling on metal-rich rocks. It is a rare taxon, that has been reported previously in the Alps only from Tyrol (Nimis et al. 2018). It can be distinguished from the more widespread *S. vesuvianum* var. *vesuvianum* by means of the glabrous surface of pseudopodetia, the usual presence of soredia, and the confluent peltate phyllocladia (Nimis 2021).

G. Gheza, F. Bottegoni, J. Nascimbene

Thalloidima toninianum (A.Massal.) A.Massal. (Ramalinaceae)

+ **LOM**: road between Dezzo and Dosso, Azzone (Bergamo), on a fissured calcareous rock cliff overhanging the road (UTM WGS84: 32T 586164.5091593), 770 m, 9 October 2021, *G. Gheza* (BOLO). – Species confirmed for the flora of Lombardia.

Thalloidima toninianum is a calciphilous, mainly Mediterranean species, that can reach the subalpine belt in the Alps (Timdal 1991). The only previous record from Lombardia is from serpentine rocks in the mountains surrounding Bormio (Anzi Lich. Rar. Langob. Exs. n. 462, cited by Baumgartner 1979 and Timdal 1991). This is the first record from the Orobic Prealps. In the reported site, this rare species occurred together with the more common *Thalloidima candidum* (Weber) A.Massal., *Thalloidima sedifolium* (Scop.) Kistenich, Timdal, Bendiksby & S.Ekman, *Endocarpon pusillum* Hedw., and *Romjularia lurida* (Ach.) Timdal.

G. Gheza

Trapelia corticola Coppins & P.James (Arnold) Bitter (Trapeliaceae)

+ **LIG**: 0.5 km E of Cascina Zattera, Levanto (Provincia della Spezia), on bark of *Castanea sativa* Mill. along road (UTM WS84: 32T 554686.4889408), 430 m, 29 April 2012, *J. Malíček* (PRA). – Species new for the flora of Liguria.

This species is a crustose lichen, usually sterile, characterized by punctiform, markedly convex C+ red soralia, locally frequent on decaying wood or bark of trees in sheltered, humid woodlands. In Italy, it was previously reported only from Lombardia (Stofer 2006), Toscana (Coppins and James 1984; Purvis et al. 1992), and Sicilia (Ottonello and Merlo 1991; Nimis et al. 1994). It is listed as "Endangered" in the Red List of the epiphytic lichens of Italy (Nascimbene et al. 2013).

J. Malíček, S. Ravera

Trapelia placodioides Coppins & P.James (Arnold) Bitter (Trapeliaceae)

+ **LIG**: Passo della Forcella (Genova), on schist rocks near the roadside (UTM WS84: 32T 526710. 4923271), 880 m, 20 August 2015, *W. v. Brackel* (GE). – Species new for the flora of Liguria.

Trapelia placodioides is an epipetric crustose lichen on base-rich siliceous rocks and pebbles. Apothecia are very rare and the species occurs mostly only with soralia; this may be the reason why it is widely underrecorded. It is characterized by an aerolate, whitish to pale pink thallus with marginal, pale greenish soralia, the thallus reacting red with calcium hypochlorite. In Italy, this species was known so far only for Trentino-Alto Adige, Friuli-Venezia Giulia, Piemonte, Toscana, and Campania (Nimis and Martellos 2022). In the Passo della Forcella, we found it growing together with *Acarospora fuscata* (Schrad.) Arnold, *Diploschistes scruposus* (Schreb.) Norman, *Lecanora polytropa* agg., *Lecidea fuscoatra* (L.) Ach., *Porpidia crustulata* (Ach.) Hertel & Knoph, *Rhizocarpon geographicum* (L.) DC., *R. lecanorinum* Anders, and other crustose epipetric lichens.

W.v. Brackel, P. Giordani

***Usnea cavernosa* Tuck. (Parmeliaceae)**

+ **VEN**: Dolomites, Misurina (Belluno), on spruce (UTM WGS84: 33T 290004.5162589), 1650 m, 12 February 2003, *J. Nascimbene* (BOLO). – Species new for the flora of Veneto.

This species, that forms long (up to 60 cm), pendulous, thalli on the branches of coniferous or deciduous trees, is widespread throughout the Alps where it is usually restricted to damp montane to subalpine forests (Nimis et al. 2018). The record reported here refers to a very humid montane spruce forest on the shores of the lake of Misurina, in the Dolomites, that hosts abundant communities of hair-lichens. Except for Trentino-Alto Adige, the other records from the Italian Alps are relatively old (Nimis 1993, 2016).

J. Nascimbene

***Usnea florida* (L.) F.H.Wigg. (Parmeliaceae)**

+ **UMB**: Terne, Sellano (Perugia), on *Fagus sylvatica* L. (UTM WGS84: 33T 327259.4753306), 710 m, 25 January 2022, leg. *R. Galli*, det. *P. Giordani*, *S. Ravera* (PAL). – Species new for the flora of Umbria.

This is a fruticose-filamentous species, with optimum, in Italy, in the upper montane and subalpine belts (Nimis 2016). In this specimen, the medulla reacts K- and P- (chemotypes with squamatic acid).

R. Galli, P. Giordani, S. Ravera

***Variospora thallincola* (Wedd.) Arup, Frödén & Søchting (Teloschistaceae)**

+ **TOS**: Arcipelago Toscano National Park, Elba island, Capoliveri, Barabarca shore (Livorno), on acid rock (UTM WGS84: 32T 611206.4734152), 3 m, 17 July 2021, *J. Nascimbene* (BOLO). – Species new for the flora of Toscana.

This species, characterized by a crustose-placodioid, episubstratic, bright golden yellow, usually epruinose thallus forming small, orbicular rosettes, is a typical coastal lichen confined to the salt-spray belt (Nimis 2016). In Italy it was previously known only from the western coast of Sardegna. Similar to several other coastal lichens, it was likely overlooked in Italy.

J. Nascimbene

***Verrucaria rupestris* Schrad. (Verrucariaceae)**

+ **VEN**: Tregnago (Verona), on calcareous rocks (UTM WGS 84: 32T 669000.806, 5042180.329), 1855(?), *A. Massalongo* (Herb. Massalongo MSNVE 25489). – Species historically recorded for the flora of Veneto.

This specimen was collected and identified as "*Amphoridium rupestre* Massal." by A. Massalongo, probably in 1855 (as most of the other specimens in the same collection), in his hometown (Tregnago). It is preserved at the Natural History Museum of Venice, in an herbarium donated by Massalongo to the Società Veneta di Scienze

Naturali, and then transferred to the NHM of Venice. *Verrucaria rupestris* is an early coloniser of pebbles, mortar walls, brick and roofing tiles, until recently confused with *V. muralis* Ach., from which it differs in the endolithic thallus and the perithecia, which are immersed in the thallus and in the rock. In Italy, it was known only from Emilia-Romagna and Trentino-Alto Adige (Nimis 2016), but is likely to be more widespread.

S. Martellos, P.L. Nimis, R. Trabucco

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